

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method Method for equalizing symbols received from a transmission channel and for decoding data therefrom, characterised comprising:

in that it performs either performing one of a first processing, comprising a which includes performing a turboequalizing sequence on the received symbols [[or]] and a second processing, comprising which includes [[an]] equalizing [[step]] the received symbols and followed by applying a turbodecoding sequence to the received symbols[[,]]; and

the selection of the first or the second processing being made upon an estimation of the delay spread of the transmission channel.

performing the first processing when a value of a delay spread of the transmission channel rises above a first threshold and performing the second processing when the value of the delay spread falls under a second threshold.

Claim 2 (Canceled).

Claim 3 (Canceled).

Claim 4 (Currently Amended): The method of claim 1, Method as claimed in claim 1, 2 or 3, characterised in that wherein the turboequalizing sequence includes the comprises: performing an iteration of a soft equalizing step equalization on the received symbols according to an APP type algorithm[,,];

[[a]] deinterleaving the received symbols; [[step]] and

[[a]] soft decoding [[step]] the received symbols.

Claim 5 (Currently Amended): The method of Method as claimed in claim 4, characterised in that wherein the APP type algorithm is a List type APP-MAP algorithm.

Claim 6 (Currently Amended): The method of claim 4, Method as claimed in claim 4 or 5, characterised in that wherein [[the]] a number of states of [[the]] a [[APP]] trellis of the APP algorithm is equal to M^{J-1} , where M is [[the]] a modulation alphabet size used over the transmission channel and J is a strictly positive integer which is chosen according to a characteristic of the transmission channel.

Claim 7 (Currently Amended): The method of Method as claimed in claim 6, characterised in that wherein a value of J is chosen to be higher than [[the]] a value of said delay spread of the transmission channel, if the transmission channel is affected by fast fading.

Claim 8 (Currently Amended): The method of Method as claimed in claim 6, characterised in that wherein a value of J is chosen to be lower than a value of said delay spread of the transmission channel, if [[the]] propagation involves a Line of Sight component.

Claim 9 (Currently Amended): The method of claim Method as claimed in claims 6, characterised in that wherein a value of J is chosen according to [[the]] a power profile of [[the]] a channel impulse response.

Claim 10 (Currently Amended): The method of claims Method as claimed in claim 7, 8 or 9, characterised in that wherein said soft decoding [[step]] is based upon an APP type

algorithm involving 2^{K-1} states, K being increased when J decreases and K being decreased when J increases.

Claim 11 (Currently Amended): The method of claims Method as claimed in claim 7, 8, or 9 [[or 10]], characterised in that wherein K is determined as the highest integer for which $a \cdot 2^{K-1} + b \cdot M^{J-1} < a \cdot 2^{k-1} + b \cdot M^{j-1}$, where a and b are fixed coefficients, is lower than a predetermined resource value.

Claim 12 (Currently Amended): The method of claims Method as claimed in claim 7, 8, or 9 [[or 10]], characterised in that wherein at least one of K and N, [[the]] a number of iterations of the turbo-equalizing sequence, is adapted so that $N \cdot (a \cdot 2^{K-1} + b \cdot M^{J-1}) < N \cdot (a \cdot 2^{k-1} + b \cdot M^{j-1})$, where a and b are fixed coefficients, is lower than a predetermined resource value.

Claim 13 (Currently Amended): The method of claim 1 Method as claimed in claim 1, 2 or 3, characterised in that wherein the turboequalizing sequence includes the comprises: performing an iteration of a soft equalizing of the received symbols, step including which includes,

[[a]] filtering [[step]] the received symbols to cancel for cancelling the
intersymbol interference over the transmission channel, the filter having filtering
including L taps, where L is a variable parameter given by the delay spread of the
transmission channel[[,]];:

[[a]] deinterleaving the received symbols;[[step]] and
[[a]]soft decoding [[step]] the received symbols.

Claim 14 (Currently Amended): The method of Method as claimed in claim 13, characterised in that wherein said soft decoding [[step]] is based upon an APP type algorithm involving 2^{K-1} states, where K is chosen as the highest integer for which $a \cdot 2^{K-1} + b' \cdot L$ $a \cdot 2^{k-1} + b' \cdot L$, where a and b' are fixed coefficients, is lower than a predetermined resource value.

Claim 15 (Currently Amended): The method of Method as claimed in claim 13, characterised in that wherein at least one of K and N, [[the]] a number of iterations of the turbo-equalizing sequence, is adapted so that $N \cdot (a \cdot 2^{K-1} + b' \cdot L) \leq N \cdot (a \cdot 2^{k-1} + b' \cdot L)$, where a and b' are fixed coefficients is lower than a predetermined resource value.

Claim 16 (Currently Amended): A method Method for coding data, characterised in that it performs comprising:

performing either a first processing, comprising which includes,
[[a]] coding step followed by an the data using a convolutional code that
includes a variable constraint length, and
interleaving [[step]] the data, or
performing a second processing, including which includes [[a]] turbocoding step for
turbocoding said data,
wherein the choice selection of the first or the second processing being is made upon
[[an]] information [[over]] relative to the delay spread of the transmission channel.

Claim 17 (Canceled).

Claim 18 (Currently Amended): A receiver Receiver comprising: means for carrying out the method claimed in any of claims 1 to 15.

a processing device configured to perform one of a turboequalizing sequence on received symbols, and equalizing of received symbols along with a turbodecoding sequence on the received symbols,

wherein the turboequalizing sequence is performed when a value of a delay spread of a transmission channel rises above a first threshold and equalize received symbols and perform a turbocoding sequence on the received symbols is performed when the value of the delay spread falls under a second threshold.

Claim 19 (Currently Amended): A transmitter Transmitter comprising: means for carrying out the method claimed in claim 16 or 17.

a processing device configured to perform one of turbocode data, and interleave data and code data, wherein the code is a convolutional code that includes a variable constraint length,

wherein a selection of turbocode data, and interleave data and code data is made upon information relative to a delay spread of a transmission channel.

Claim 20 (Currently Amended): A telecommunications Telecommunication system comprising:

a transmitter as claimed in claim 19 and a receiver as claimed in claim 18, the transmitter including

a processing device configured to perform one of turbocode data, and interleave data and code data, wherein the code is a convolutional code that includes a variable constraint length,

wherein a selection of turbocode data, and interleave data and code data is made upon information relative to a delay spread of a transmission channel, the receiver including
a processing device configured to perform one of a turboequalizing sequence on received symbols, and equalizing received symbols along with a turbodecoding sequence on the received symbols.

wherein the turboequalizing sequence is performed when a value of a delay spread of a transmission channel rises above a first threshold and equalize received symbols and perform a turbocoding sequence on the received symbols is performed when the value of the delay spread falls under a second threshold,
wherein the receiver sends the receiver sending back to the transmitter said information relative to [[the]] a delay spread of [[the]] a transmission channel.

Claim 21 (Currently Amended): The telecommunication Telecommunication system of as claimed in claim 20, characterised in that wherein the transmitter further comprises a convolutional coder whose constraint length is increased or decreased upon a request from the receiver.